



April 26, 2007

Clerk of the Board
California Air Resource Board
Stationary Source Division
1001 I Street,
Sacramento, CA 95814

RE: United Airlines' Comments on ARB's Modifications to the Proposed Regulation Order for Hexavalent Chromium Airborne Toxic Control Measure for Chrome Plating and Chromic Acid Anodizing Operations – As Presented in Attachment 1 to the Board Resolution 06-25

Dear Clerk of the Board,

Thank you for allowing United Airlines (United) to submit comments to the Air Resource Board (ARB) under the 15-day public comment period for the most recent version of the amendment to Title 17, California Code of Regulations, Section 93102 as presented in Attachment 1 to the Board Resolution 06-25.

Comments on the ATCM - Regulatory Language Changes

United submitted similar comments to the ARB on a previous version of the draft ATCM, however, since many of the issues discussed in our letter were not acknowledged, nor did anyone from the ARB Staff contacted us to discuss the identified issues; United still has concerns on the provisions in the ATCM and respectfully requests that the ARB seriously consider the comments prior to signing into law.

Section 93102.3(a) Definitions:

For the three facility size definitions at (31) "*Large, hard chromium electroplating facility*"; (36) "*Medium, hard chromium electroplating facility*"; (48) "*Small, hard chromium electroplating facility*" it is recommended that the ARB add "**from all affected tanks**" at the end of the sentence. This would make clarification that the emission ranges specified are from all tanks not just the one tank, since the definition of facility does not indicate this.

Although the end result of the emission limits will do away with the existing limits presented in Section 93102.4(a), we find no value in keeping Table A or B with classifications such as large, medium and small in terms of controlled emissions. The Staff Report has found that approximately 4 pounds of hexavalent chromium emissions are emitted per year from 228 sources, how is it that a source can still be classified as >10 lbs/yr controlled for large facilities and the like?

At the definition (37)(A) *Modification*, add an underline to the word “not” in the last sentence of the paragraph to add emphasis to remind the reader that the items listed are exclusionary.

Section 93102.4(b) – Table 93102.4, - Effective Date

The term “Effective Date” appeared to have two meanings. It appeared confusing that the table column **Effective Date** and the inscriptions indicating the period after Effective Date (e.g., Two Years aft Effective Date) do not communicate the rule-maker’s intent correctly. We interpret the following:

The Effective Date is the future date in which the emission limit will become effective. The inscription “[Two Years after Effective Date]” means two years after the effective date of the adopted proposed regulation or implementation date – the date the Executive Officer signs the proposed ATCM amendments into law. Perhaps in the future the ARB Staff will use implementation date when referencing the expected date of adoption.

Section 93102.4(b) – Table 93102.4, Footnote 3:

It is our understanding that part of the basis ARB establishing the emission limitations for the various receptor distance and annual current consumption was risk based. That is, the ARB in establishing the emission limits, conducted risk assessments for various configurations and have determined that if a facility reduces emissions to the levels indicated in Table 93102.4, then the corresponding public risk impact would be at acceptable levels (reduction from pre-amendment controls). Therefore, if a facility has undergone it’s responsibility and the associated financial burden in reducing emissions via air pollution controls and demonstrates that the emissions meet the emission limitation set forth in the ATCM, then that facility should be exempt from having to conduct a site-specific risk analysis. Conducting a site-specific risk analysis (likely a refined risk assessment) would put an additional financial burden on the facility.

If the ARB decides to keep the site-specific analysis requirement in the regulation, United further recommends that the regulation require the local air pollution control district (LAPCD) to perform the analysis not the facilities themselves. This is based on the fact that most LAPCDs have established technical and planning divisions that conduct air dispersion modeling and risk evaluations. Since the LAPCDs already have the appropriate dispersion models, receptor grids, local representative meteorology and source information, such an effort would not only be more cost effective, but would allow a more uniform approach that can be better compared across Districts.

Section 93102.4(d)(2):

Under this subpart, the emission limit for new facilities has been lowered from 0.0015 to 0.0011 milligrams per ampere-hour after controls.

We could not find evidence of any existing facilities that can demonstrate meeting hexavalent chromium emissions to this level. This “last-minute” change in the emission limit appeared to be a way for the Staff to differentiate between existing and new facilities, as most regulations have a built-in stepped approach that places more stringency on newer emissions.

Without public disclosure or review of the additional data analysis that the ARB staff conducted, United does not believe the change to be justified and recommends that the Board maintain the 0.0015 mg/amp-hr level as originally proposed.

Section 93102.5:

This Section titled - Requirements that Apply to Existing, Modified, and new Hexavalent Chromium Plating or Chromic Acid Anodizing Facilities Beginning [Effected Date].

Note that this numbered section is also used for CARB’s newly adopted Thermal Spray ATCM. It is suggested that the ARB consider reassignment of a Section number to the Thermal Spray ATCM or skip this number within this proposed regulation.

Section 93102.5(b): Environmental Compliance Training:

Although United Airlines previously submitted comments on this section in a letter to the ARB dated August 25, 2006, and November 10, 2006 additional comment is provided as:

While training may be a good idea for small facilities with limited number of responsible people, extending this to a large facility introduces various complexities as described below. At a facility such as ours, there are many people at varying hierarchy within the company that are “responsible” for compliance and recordkeeping. From the mechanics at the shop floor, supervisors, department managers, general manager, environmental staff, corporate staff including the on-site Responsible Official (VP of Maintenance) – all have a role in the company’s environmental compliance. We believe the requirements as proposed are unduly burdensome for the following reasons:

1. The idea of mandatory training within a highly specialized field within a State regulation is unprecedented. Since a facility is ultimately required to comply with the ATCM and any other applicable regulation, then it should be up to the facility on how it achieves compliance. Perhaps the local air pollution control districts and their implementing regulations can require such training, but it should be up to the individual District’s to decide to implement such a requirement. It is believed that mandatory attendance to a State sponsored training is beyond the purview of the legislative process in setting emission standards.

2. Conducting the training every two years is completely unnecessary. Since those that are working at the facility do so on a regular basis are implementing the ATCM requirements on a daily basis, forgetting the requirements is quite hard to do. United recommends that such recurrent training not be required.
3. The ARB Compliance Assistance Training course material is overly simplistic, covers areas related to process safety and chemical awareness as well as regurgitation of the ATCM requirements. United has in-house Training and Qualification courses that already incorporate these principles.
4. The requirement to attend and pay for an agency sanctioned course has the appearance as nothing more than an income bearing scheme cloaked within a regulation. Note that many other regulations such as OSHA, Hazardous Waste and other non-air related disciplines allow training by third-party organizations or by the company's sanctioned training department.
5. The location of the training in southern California is not convenient for our facility and would require extensive travel and travel costs.

The ARB Compliance Assistance Training website describes Course #290.3, Chrome Plating & Anodizing and indicates the manual used for the training as *Handbook #02-033*. This handbook published by CARB is entitled "*Chrome Plating and Anodizing Operations Self-Inspection Handbook, For Personnel in Chrome Plating and Chromic Acid Anodizing Operations.*"

United reviewed the CARB published booklet and it appears to be simplistic providing general information on air pollution, process information, general health effects and chemical safety and hazards, information on the regulation, requirements and pollution control along with inspection and recordkeeping summary.

The emission limits, control equipment requirements and quarterly inspection portion is basically a synopsis of the requirements already identified in the current ATCM (which can be read by anyone for free and not have to pay to attend a course in which the same or similar information will be restated by an instructor).

In addition, the current Handbook references the existing ATCM and not the proposed amendments to the ATCM, does the ARB intend to update the handbook upon promulgation of the final version of the ATCM?, If so, when would the revision be completed?

United also has the Chrome Plating and Anodizing Operations Interactive CD January 2006 Version 1.0b. Although the information presented in the CD is more in depth than the handbook, most of the information is already incorporated into United's in-house training programs. Like the handbook, the regulatory information does not have the proposed regulatory changes or other staff report supporting documentation.

We therefore, respectfully request that the ATCM have provisions to allow for equivalent “in-house” training programs such as ours, subject to verification by CARB or local air pollution control agency that may be tasked with enforcing compliance of this ATCM. Since we have the Handbook and CD we can present some of those materials in addition to our own materials without the added expense of travel, course cost, loss of production and employee pay.

93102.5(b)(4) Nothing in this subsection 93102.5(b) shall absolve an owner or operator from complying with sections 93102 – 93102.16:

While this statement is meant as a catch all, it appears to be a meaningless statement, since it states the obvious - that it is the general duty of the facility to comply with the regulation.

The placement of such a phrase within the training portion can be interpreted that if for some reason the training doesn't work out, or persons trained are not available at the facility (e.g. training is cancelled, or persons trained are not available due to illness, vacation) that the facility must still comply with the ATCM.

This means that the facility must then have someone not trained to conduct the required recordkeeping or other compliance related task. Essentially the statement says its okay to have someone not trained to do the required tasks as long as compliance is achieved.

United recommends that 93102.5(b)(4) be deleted from the proposed regulation.

93102.5(c)(B). Facilities without automated lines.

1. Each electroplated or anodized part must be handled so that chromic acid is not dripped outside the electroplating tank.

Due to the intricate shapes of some parts electroplated at United, upon parts pull and rinse, (and after allowing for excess liquid to drain back in the plating tank) usually by hoist and during transport to the next process, there is after rinsing over the tank, potential for residual chromic acid within a crevice or pocket to drip outside of the tank depending on the angle at which the part is placed. Hence, compliance would be very difficult to maintain on a routine basis. According to the way the subsection is written, one drop outside the tank would constitute a violation of the regulation! It is believed that this is not the intent of the regulation to control every drop of chromic acid but to emphasize the effort to reduce potential emission of hexavalent chromium. Therefore, United recommends modifying the section to read:

“Each electroplated or anodized part must be handled so as to minimize chromic acid spillage outside the electroplating tank.”

2. Each facility spraying down parts over the electroplating or anodizing tank(s) to remove excess chromic acid shall have a splash guard installed at the tank to minimize over-spray and to ensure that any hexavalent chromium laden liquid is returned to the electro-plating or anodizing tank.

This subsection does not provide or reference splash guard specifications or how many sides of the tank must have splash guards. Will this be at the discretion of the facility? What percentages of facilities have splash guards and what are their configurations.

Based on the type of parts and workflow and tank configurations at United, implementation of splash guards can be quite an impediment to tank access and to hoist clearance on some of the larger landing gears. For those facilities where splash guards may be impractical, we suggest that the subsection have an added statement, stating that if a splash guard is not feasible, then the owner or operator should rinse each part so as to minimize excess chromic acid spillage outside the electroplating tank.

93102.5(c)(5)

Does the statement “or otherwise cleaned as approved by the permitting agency” include wash down with hose? The flooring is setup on a mezzanine-like area that made up of metal grating to allow spillage and cleanup to be directed into collection troughs and then to a central collection and neutralization area in the building basement. Please verify that this would practice would meet the intent of the regulation.

We believe that the strict schedule of once per week to clean such areas is unnecessary and burdensome. If a facility must comply with 93102.5(c)(1), (2), (3) and (4), then how is it possible to have at the end of each week any liquid or solid accumulation to be cleaned. If the areas are already free of any potential liquid or solid materials, why should a facility go through the burden to clean an area that does not need cleaning?

United recommends that 93102.5(c)(5) be deleted from the proposed regulation.

93102.7(a)(1) “The following hexavalent chromium facilities must conduct a performance test to ...”

Please modify the phrase “hexavalent chromium facilities” at this point and all locations throughout the regulation. There is no such thing as “hexavalent chromium facilities”. It is suggested that the phrase be written as:

“The following chromium plating and chromic acid anodizing facilities must conduct a performance test to ...”

93102.7(a)(3):

If source testing must be concluded by the effective date (Table 93102.4), then that in effect decreases the amount of time a facility has to comply with the regulation. This is especially applicable to the two-years or less effective dates. In order to meet the 93102.7(a)(3) deadline, this would provide less time for a facility to actually implement the necessary changes to the process including testing of in-tank mechanical fume suppressants and/or the modification of associated ventilation and abatement systems.

A typical source test itself can take up to two months or more to conduct and have a final report prepared for submittal. This in itself would cut short the allotted time frame granted in Table 93102.4. United recommends that this subsection be re-written to allow demonstration of compliance within 6 months of the applicable effective date period.

93102.7(e) Test all emission points. Each emission point subject to the requirements of this regulation must be tested unless a waiver is granted by U.S. EPA, and approved by the permitting agency.

Under what circumstances can a waiver be granted? Does the ARB have any examples of such waivers?

If a facility has multiple stacks of the exact configuration (both process and abatement), can a facility conduct a source test at one exhaust stack to be representative of the remaining exhaust stacks providing certain criteria be met?

Table 93012.10 -- Summary of Inspection and Maintenance Requirements

Under Inspection and Maintenance Requirements column, Item 1, it is suggested that the ARB modify the wording to include "intended performance" as one of the indicators that can be affected.

"1. Visually inspect device to ensure no evidence of chemical attack that affects the structural integrity or intended performance of the device."

Under Inspection and Maintenance Requirements column for High Efficiency Particulate Air (HEPA) filters, the inspection requirement (item 1) to look for changes in the pressure drop appears to be vague. Since pressure drop is covered in Section 93102.9(b), looking for changes in the pressure is not an inspection/maintenance related activity, rather an ongoing monitoring activity – just like the CMP, PBS or fiberbed mist eliminators.

Since there is no requirement to conduct pressure drop evaluations for CMP, PBS or fiberbed mist eliminators, there should not be one for HEPA.

It is recommended that the ARB delete item 1 under the HEPA Inspection and Maintenance Requirements

Supplementary to the comments on Section 93102.4 above:

Based on Table 93102.4(a)(1)(A), for a large facility, >60 million amp-hrs /yr and an emission rate of 0.006 mg/amp-hr, using these data points, United arrives at the following hexavalent chromium emission rate:

$$E = 0.006 \text{ mg/amp-hr} \times 1 \text{ g/1000 mg} \times 1 \text{ lb/ 453.592 g} \times 120,000,000 \text{ amp-hrs/yr} = 1.58 \text{ lbs/yr}$$

Even at 120 million amp-hrs per year, the maximum expected emission is a little over 1 lb. So how can a controlled facility be “large” by exceeding 10 lbs/yr?

On the flip side, a “small” facility identified as <2 lb/yr having an allowable emission rate of 0.15 mg/amp-hr, with an annual rectifier usage of 60 million amp-hrs/yr produces 19.82 lbs/yr. Of course a “small” facility would not come anywhere near 60 million amp-hrs, yet the table has that category/option. In this case, it would appear that a “small” facility would have a maximum rectifier capacity of 2 million amp-hrs/yr to stay just under 2 lbs/yr.

Thank you for your consideration and acceptance of the comments presented above. Please call or e-mail if you require additional information or clarification.

Sincerely,



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